Abstract

The sinking flux of particulate organic matter to the sediment is an important process to analyse the formation mechanism of oxygen-deplete water mass. In this study, we carried out the simulation for sensitivity analysis of two countermeasure plans on the sinking flux of particulate organic matter using numerical ecosystem model in Mikawa Bay. One is the case of the reduced loading from rivers by 50% for organic substance and nutrients, and the other is the case that the clam resources would increase to the level in 1960. The results showed that the clam restoration is more effective than the reduced loading from rivers to lower the sinking flux of particulate organic matter. The results showed that the variation of COD concentration at open boundary of the Mikawa Bay also affect on the sinking flux of particulate organic matter. Therefore the case that DOC degradation rate parameter change 0.005 (labile) to 0.0005 (refractory) showed the sinking flux of particulate organic matter decreased. Even if DOC concentration becomes high at the boundary, its effect on the sinking flux is small.